

10/555265

IC06 Rec'd PCT/PTO 01 NOV 2005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Atty. Docket

ZHOU et al.

NL 030458

Serial No.

Group Art Unit

Filed: CONCURRENTLY

Ex.

DISPLAY DEVICE

Commissioner for Patents  
Alexandria, VA 22313-1450

PRELIMINARY AMENDMENT

Sir:

Prior to calculation of the filing fee and examination, please  
amend the above-identified application as follows:

Please enter  
amendments

Ulk  
4/2/08

10/555,265  
5/2/03

REMARKS

1. (original) A display device comprising electrophoretic particles, a display element comprising a pixel electrode and a counter electrode between which a portion of the electrophoretic particles are present, and control means for supplying a drive signal to the electrodes to bring the display element in a predetermined optical state corresponding to the image information to be displayed, characterized in that control means are further arranged for supplying a preset signal preceding the drive signal comprising a preset pulse having an energy sufficient to release the electrophoretic particles at a first position near one of the two electrodes corresponding to a first optical state, but too low to enable the particles to reach a second position near the other electrode corresponding to a second optical state, wherein the duration of the preset pulse is less than 19 msec.

2. (original) A display device as claimed in claim 1, wherein the control means are arranged for supplying a set of preset pulse, wherein the duration of the majority, preferably all, of the preset pulses is less than 19 msec.

3. (currently amended) A display device as claimed in claim 1-~~or~~ 2, wherein the duration of the preset pulse or pulses is more than 0.5 msec.

4. (currently amended) A display device as claimed in claim 1-~~or~~ 2, wherein the duration of the preset pulse or preset pulses lies between 1 and 15 msec.

5. (original) A display device as claimed in claim 4, wherein the duration of the preset pulse or preset pulses lies between 2 and 10 msec.

6. (original) A display device as claimed in claim 5, wherein the duration of the preset pulse or preset pulse lies between 3 and 5 msec.

7. (original) A display device as claimed in claim 1, wherein the control means being further arranged for generating the preset pulse with a negative or positive polarity and the control means being further arranged for generating the drive signal comprising a pulse with a negative or positive polarity, whereby the polarity of the preset pulse is opposite to the polarity of the pulse of the data signal.

8. (original) A display device as claimed in claim 7 wherein the control means being further arranged for generating an even number of preset pulses.

9. (original) A display device as claimed in claim 1 wherein one of the electrodes comprises a data electrode and the other electrode comprises a selection electrode and the control means further comprising first drive means for applying a selection signal to the selection electrodes and second drive means for applying a data signal to the data electrode.

10. (original) A display device as claimed in claim 1 wherein the pixel electrode of the display element is being coupled to a selection electrode or a data electrode via a switching element, and the control means further comprising first drive means for applying a selection signal to the selection electrodes and second drive means for applying a data signal to the data electrode.

11. (currently amended) A display device as claimed in claim 9-~~or 10~~, wherein selection electrodes associated with display elements are interconnected in two groups, and the control means being arranged for generating a first preset signal having a first phase

to the first group and a second preset signal to the second group having a second phase opposite to the first phase.

12. (currently amended) A display device as claimed in claim 9~~or~~ 10, wherein the second drive means are arranged for generating the preset signal.

13. (currently amended) A display device as claimed in claim 9~~or~~ 10, wherein the pixel electrode is coupled to the control means for generation of the preset signal via the counter electrode.

14. (original) A display device as claimed in claim 13, wherein the counter electrode is divided into two portions, wherein each portion is associated with a set of display elements connected via a selection electrode.

15. (original) A display device as claimed in claim 10, wherein the pixel electrode is coupled via a first additional capacitive element to the control means for receiving the preset signal.

16. (original) A display device as claimed in claim 10, wherein the pixel electrode is being coupled to the control means via a further switching element.

17. (original) A display device as claimed in claim 1, wherein the display comprises two substrates one of which is transparent and the electrophoretic particles are present between the two substrates.

18. (original) A display device as claimed in claim 1, wherein the electrophoretic material is an encapsulated electrophoretic material.